



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

H.A

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/776,365

02/11/2004

Yoshikatsu Itoh

188-96

3208

28249

7590

07/12/2006

DILWORTH & BARRESE, LLP
333 EARLE OVINGTON BLVD.
UNIONDALE, NY 11553

EXAMINER

MARTIN, LAURA E

ART UNIT

PAPER NUMBER

2853

DATE MAILED: 07/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/776,365

Applicant(s)

ITOH ET AL.

Examiner

Laura E. Martin

Art Unit

2853

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 May 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 3-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 3-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a). Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 6, 3, 4, and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Hilgenfeld et al. (US 6391388).

Hilgenfeld et al. discloses:

As per claim 6: an ink jet printing method which comprises printing on a base material, an ink set comprising at least four color inks as colorants which are magenta ink of gold purple as red component, red ink of cadmium red as red component, yellow ink, and cyan ink (column 5, lines 6-10) to form an image on a base material and thereafter perform baking (column 4, lines 45-65).

As per claim 3: an ink jet printing method wherein said yellow ink is cadmium yellow ink and said cyan ink is cobalt aluminum chrome blue ink (column 5, lines 6-10).

As per claim 4: an ink jet printing method comprising at least five colors of organic pigments as colors which are magenta ink of gold purple and red ink of cadmium red as red components, as well as yellow ink of cadmium yellow, and cyan ink of cobalt aluminum chrome blue, and black ink (column 5, lines 6-10).

As per claim 9: a printed matter obtained by the method of claim 6 (column 6, lines 10-11).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hilgenfeld et al. (US 6391388) in view of Minami (US 6741386).

Hilgenfeld et al. discloses:

As per claim 5: a black ink (column 2, line 61).

Hilgenfeld et al. does not disclose:

As per claim 5: a cobalt ferrite black ink.

Minami discloses:

As per claim 5: a cobalt ferrite black ink (column 9, lines 1-8).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the ink set taught by Hilgenfeld et al. with the disclosure of Minami in order to create a higher quality baked color.

Claim 7, 8, and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hilgenfeld et al. (US 6391388) in view of Oishi et al. (JP 2001081363).

Hilgenfeld et al. discloses:

As per claim 7: the base material is an inorganic material (column 4, lines 45-65)) and the ink receptor layer is formed using glass frit on a surface of the basematerial (column 3, lines 44-55).

Hilgenfeld et al. does not disclose:

As per claim 7: using glass frit on a surface of the base material prior to inkjet recording.

As per claim 8: after printing and image formation on the base material using an ink jet, all of the inorganic pigments are baked simultaneously to the base material by a single baking operation.

As per claim 10: after the printing and image formation on the base material using an ink jet, all of the inorganic pigments are baked simultaneously by as single baking operation.

Oishi et al. discloses:

As per claim 7: using glass frit on a surface of the base material prior to inkjet recording [0008].

As per claim 8: after printing and image formation on the base material using an ink jet, all of the inorganic pigments are baked simultaneously to the base material by a single baking operation [0025-0026].

As per claim 10: after printing and image formation on the base material using an ink jet, all of the inorganic pigments are baked simultaneously by as single baking operation [0025-0026].

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the ink set taught by Hilgenfeld et al. with the disclosure of Oishi et al. in order to provide an easy method of transferring ink to the base material.

Claim 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hilgenfeld et al. (US 6391388) in view of Katsuragi et al. (JP 20010030678).

Hilgenfeld et al. discloses:

As per claim 11: an ink jet printing method which comprises printing on a base material, an ink set comprising at least four color inks as colorants which are magenta ink of gold purple as red component, red ink of cadmium red as red component, yellow ink, and cyan ink (column 5, lines 6-10) to form an image on a base material and thereafter perform baking (column 4, lines 45-65).

As per claim 12: at least four color (column 5, lines 6-10).

Hilgenfeld et al. does not disclose:

As per claim 11: separately ejecting inks.

As per claim 12: separately ejecting inks.

Katsuragi et al. discloses:

As per claim 11: separately ejecting inks (figure 9, elements 101-105).

As per claim 12: separately ejecting inks (figure 9, elements 101-105).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the ink set taught by Hilgenfeld et al. with the disclosure of Katsuragi et al. in order to create a clearer image with multiple colors.

Response to Arguments

Applicant's arguments filed 5/17/06 have been fully considered but they are not persuasive.

Applicant argues that Hilgenfeld et al. and Oishi et al. do not teach ejecting separately the respective inks; however, it is well known in the art for ink to be printed separately. It would have been obvious to one with ordinary skill in the art at the time the invention was made to modify the ink set taught by Hilgenfeld et al. with an ink jet printer that prints each ink separately (such as in the Katsuragi et al. publication) in order to more quickly create images that have a variety of colors and improved sharpness.

Hilgenfeld et al. discloses the particular red components claimed in the applicant's invention. Oishi et al. discloses baking inorganic pigments simultaneously during a single baking operation, as well as an ink receptor layer being formed using glass frit on a surface of the base material prior to inkjet recording. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the ink set disclosed by Hilgenfeld et al. with the disclosure of Oishi et al, for the reasons stated in the above Office Action. The colors taught Hilgenfeld et al. meets the specific types of red pigment limitations described the invention.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Laura E. Martin whose telephone number is (571) 272-2160. The examiner can normally be reached on Monday - Friday, 7:00 - 3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen D. Meier can be reached on (571) 272-2149. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Laura E. Martin


7/7/06
MANISH S. SHAH
PRIMARY EXAMINER